

Patent Claims

1. A method for supporting the driver of a vehicle
5 during an emergency braking process in order to prevent
the vehicle from colliding with an object which is
located in a detection zone in front of the vehicle in
the direction of travel, in particular a preceding
vehicle, braking means (70) of the vehicle (50) for
10 carrying out the emergency braking process being actuated
independently of the driver if a predefined emergency
braking condition (16) is met and if it is determined
that the driver wishes to carry out the emergency braking
process, emergency braking information to the driver of
15 the vehicle (50) being issued when the emergency braking
condition (16) is met, characterized in that information
to the driver is issued even when the emergency braking
condition (16) is not met, said information informing the
driver of the vehicle (50) about the current situation in
20 the surroundings or the traffic situation in the
detection zone (54), the information to the driver being
adjusted as a function of one or more predefined
information conditions (14, 17, 18) being met.

25 2. The method as claimed in claim 1, characterized in
that the objects (i) located in the detection zone (54)
are detected, a positional variable which describes a
spatial position (x_i , y_i) of the respective object (i) in
relation to the vehicle (50) and/or a relative speed
30 variable which describes a relative speed ($v_{rel,i}$) between
the vehicle (50) and the respective object (i) being
determined for each detected object (i).

3. The method as claimed in claim 2, characterized in
35 that by evaluating the positional variables and/or
relative speed variables which are determined for the
objects (i), those objects which constitute obstacles for

the vehicle (50) with respect to its instantaneous course are determined from the totality of the detected objects (i).

5 4. The method as claimed in claim 3, characterized in that by evaluating the positional variables and/or relative speed variables which are associated with the obstacles, that obstacle (j) which has the greatest relevance for a collision of the vehicle (50) is
10 determined.

5. The method as claimed in one of claims 2 to 4, characterized in that the emergency braking condition (16) is predefined as a function of the determined
15 positional variable and/or the determined relative speed variable.

6. The method as claimed in one of claims 2 to 5, characterized in that the information conditions (14, 17,
20 18) are predefined as a function of the determined positional variable and/or the determined relative speed variable.

7. The method as claimed in one of claims 1 to 6,
25 characterized by visual and/or acoustic and/or haptic information to the driver.

8. The method as claimed in one of claims 1 to 7, characterized in that a driver's wish to carry out the
30 emergency braking process is determined by evaluating the activation of a brake operator control element (71) which is provided to enable the driver to influence the braking means (70) of the vehicle (50).

35 9. The method as claimed in one of claims 1 to 8, characterized in that a driver's wish to carry out the emergency braking process is determined by evaluating the

activation of a driving operator control element (74) which is provided to enable the driver to influence drive means (73) of the vehicle (50).

5 10. The method as claimed in one of claims 1 to 9, characterized in that the emergency braking process is carried out with the objective of bringing about a predefined safety distance (s_0) between the vehicle (50) and object (i) and/or a predefined relative speed ($v_{rel,0}$)
10 between the vehicle (50) and object (i).

11. A device for supporting the driver of a vehicle during an emergency braking process in order to prevent the vehicle with colliding with an object which is
15 located in a detection zone in front of the vehicle in the direction of travel, in particular a preceding vehicle, braking means (70) of the vehicle (50) being actuated independently of the driver in order to carry out the emergency braking process if an evaluation unit
20 (60) detects that a predefined emergency braking condition (16) is met, and that a driver wishes to carry out an emergency braking process, with the evaluation unit (60) causing emergency braking information to be issued to the driver of the vehicle (50) when the
25 emergency braking condition (16) is met, characterized in that the evaluation unit (60) causes information to the driver to be issued even when the emergency braking condition (19) is not met, said emergency braking condition (19) informing the driver of the vehicle (50)
30 about the current situation in the surroundings or the traffic situation in the detection zone (54), the evaluation unit (60) adjusting the information to the driver as a function of one or more predefined information conditions (14, 17, 18) being met.